SIERRA VIDEO SYSTEMS

Crestron E-Server 908012

User's Manual

sierravideosystems
A KRAMER ELECTRONICS COMPANY

UM908012-01

CRESTRON E-SERVER

User's Manual

© Sierra Video Systems
P.O. Box 2462 Grass Valley, CA 95945
Tel: (530) 478-1000
Fax: (530) 478-1105
Email: info@sierravideo.com

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Chapter

1

Introduction

Before You Begin

There are several terms and acronyms that you should become familiar with before reading this manual. They are shown below.

Term/Acronym	Definition
Crosspoint	The electronic switch that assigns one of the inputs on the matrix crosspoint modules to an output.
Destination	The output of a routing switcher connected to a device that receives signals from the output of the switcher.
Input	Connected to the source that provides the signal to the switcher.
Matrix	The crosspoint array of the switcher module that selects which input is selected to an output.
Output	Connects the signal to the destination device.
Protocol	The command structure used on a serial bus to affect a switch or multiple switches on the routing switcher.
Routing Switcher	Consists of one or more crosspoint modules that switch together, or sometimes independently, to connect the desired signals through the switcher.
Source	The signal that is connected to the input of the routing switcher.
Serial Port	The 9-pin RS232 connector that allow you to control the switcher using a standard personal computer or other external device. Sends control protocol commands in ASCII.

Warnings & Safety Regulations

The information in the following section provides important warnings and safety guidelines for both the operator and service personnel. Specific warnings and cautions may be found throughout this manual. Please read and follow the important safety precautions noting especially those instructions relating to risk of fire, electrical shock and injury to persons.

Any instructions in this manual that require opening the equipment cover or enclosure are intended for use by qualified service personnel only. To reduce the risk of electrical shock, do not perform any servicing other than what is contained in the operating instructions unless you are qualified.

Warnings

- Heed all warnings on the unit and in the operating instructions.
- Disconnect AC power before installing any options.
- Do not use this product in or near water.
- This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting inputs and outputs.
- Route power cords and other cables so that they are not likely to be damaged, or create a hazard.
- Dangerous voltages exist at several points in this product. To avoid personal injury, do not touch unsafe connections and components when the power is on.
- To avoid fire hazard, use only the specified type, correct voltage, and current rating of fuse. Always refer fuse replacement to qualified service personnel.
- Have qualified personnel perform safety checks after any completed service
- This is an FCC class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take necessary measures.

Cautions

- Use the proper AC voltage to supply power to the switcher. When installing equipment, do not attach the power cord to building surfaces.
- To prevent damage to equipment when replacing fuses, locate and correct trouble that caused the fuse to blow before applying power.
- Use only the recommended interconnect cables to connect the switcher to other frames.
- Follow static precautions at all times when handling the equipment.

Cautions (continued)

- Leave the side, top, and bottom of the frame clear for air convection cooling and to allow room for cabling. Slot and openings in the frame are provided for ventilation and should not be blocked.
- Only an authorized Sierra Video Systems technician should service the switchers. Any user who makes changes or modifications to the unit without the expressed approval of the Sierra Video Systems will void the warranty.

EMC Regulatory Notices

Federal Communications Commission (FCC) Part 15 Information: This device complies with Part 15 of the FCC standard rules. Operation is subject to the following conditions:

This device may not cause harmful interference

This device must accept any interference received including interference that may cause undesirable operations.

Delivery Damage Inspection

Carefully inspect the frame and exterior components to be sure that there has been no shipping damage. Make sure all modules are seated correctly and have not detached during shipment. Also, make sure the input buffer modules on the rear panel are secure.

Factors Affecting Quality of Results

There are many factors affecting the quality of results when signals are transmitted from a source to a destination.

Signal cables — Use only the best quality cables to avoid interference and degraded signal quality and elevated noise levels.

Sockets and connectors of the sources and destinations — Use only the highest quality, since "zero ohm" connection resistance is the target. Connectors should also match the required impedance (75 ohm in video) to minimize return loss.

Amplifying circuitry — Must have quality performance when the desired end result is high linearity, low distortion, and low noise.

Distance between sources and destinations — Plays a major role in the final result. For long distances (over 15 meters) between sources and destinations, special measures should be taken to avoid high frequency cable losses. These measures include using higher quality cables and/or adding line cable equalizing amplifiers.

Interference from neighboring electrical appliances — these can have an adverse affect on signal quality. Balanced audio lines are less prone to interference, but unbalanced audio should be installed away from any main power lines, electric motors, transmitters, etc. even when the cables are shielded.

CAUTION!

Only an authorized Sierra Video Systems technician can service the control panels. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void the warranty

Use the proper AC to DC adapter to supply power to the unit.

Use only the recommended interconnect cables to connect the control panel to other frames.

Crestron E-Server Overview

Introduction

The Crestron E-Server LAN solution uses Crestron technology and proprietary Java based software to create a virtual environment for Sierra Video Systems routing switchers to be Internet (LAN) appliances.

The Crestron E-Server incorporates three different control panels for different levels of configuration using associated hardware. This includes a “password protect-able” programmable panel.

The Crestron E-Server is a small black box with two RS-232 serial ports. One port is connected to the routing switcher to control the router. The other port is for connection to a PC to configure the Crestron E-Server.

The unit also has an Ethernet port that can be connected to the user’s network. The user sets the E-Server to an IP address, and can then use an Internet browser on a Windows system to address the E-Server’s software files. The browser will display web pages that contain simulated router control panels. By entering numbers or clicking buttons on these panels, the user can control most Sierra Video Systems routing switchers.

Crestron E-Server

Front Panel

Back Panel

Chapter

2

Installation

The Crestron E-Server comes with a Crestron QM-RMC Room Media Controller Operations Guide. This Operations Guide is for reference only. This Sierra Video Systems Users Manual is to be used when interfacing with Sierra Video Systems routing switchers.

System Requirements

Local Area Network must be 100BaseT

Setup PC;

Windows 2000 or newer

P III or better

128 M Ram

Sun Java Web Start

Internet Explorer version 6 or newer

Mounting

Carefully inspect the frame to ensure that there has been no shipping damage. Make sure all shipping material is removed.

The Crestron E-Server can be mounted anywhere but keep in mind the RS-232 connection should be as short as possible.

Dimensions

The Crestron E-Server is 4 ½” wide, 1 ¼” tall and 5 ½” deep.

Connecting to a PC

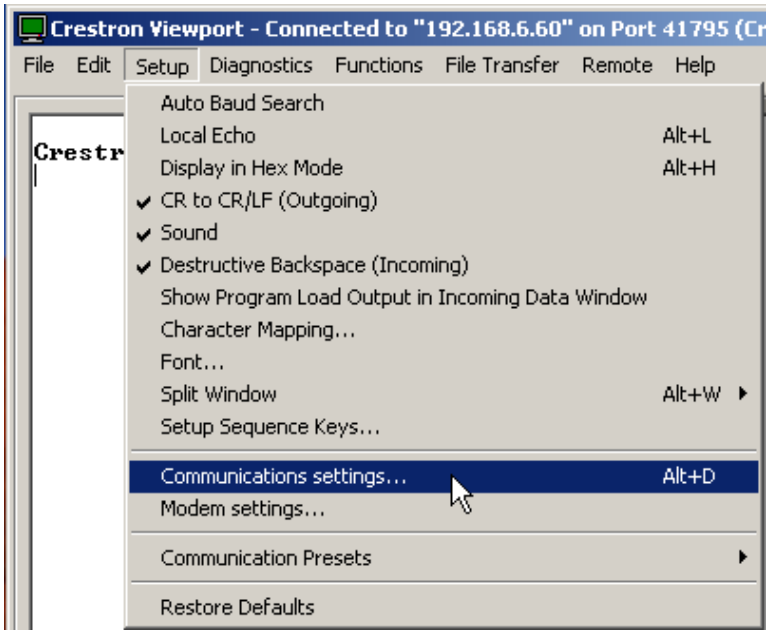
Connect the Crestron **COM B** port to the PC comport with an appropriate cable or cable/dongle combination (supplied by Sierra Video Systems).

This Pin on COM port PC side (Use female DB-9 connector)	Connects to this pin on Crestron COM B (Use female DB-9 connector)
Pin 1 (DCD input)	No Connection
Pin 2 (RXD input)	Pin 3 (TX output)
Pin 3 (TXD output)	Pin 2 (RXD input)
Pin 4 (DTR output)	No Connection
Pin 5 (GND)	Pin 5 (GND)
Pin 6 (DSR input)	Pin 4 (DTR output)
Pin 7 (RTS output)	Pin 8 (CTS input)
Pin 8 (CTS input)	Pin 7 (RTS output)
Pin 9 (RI input)	No Connection

Setup

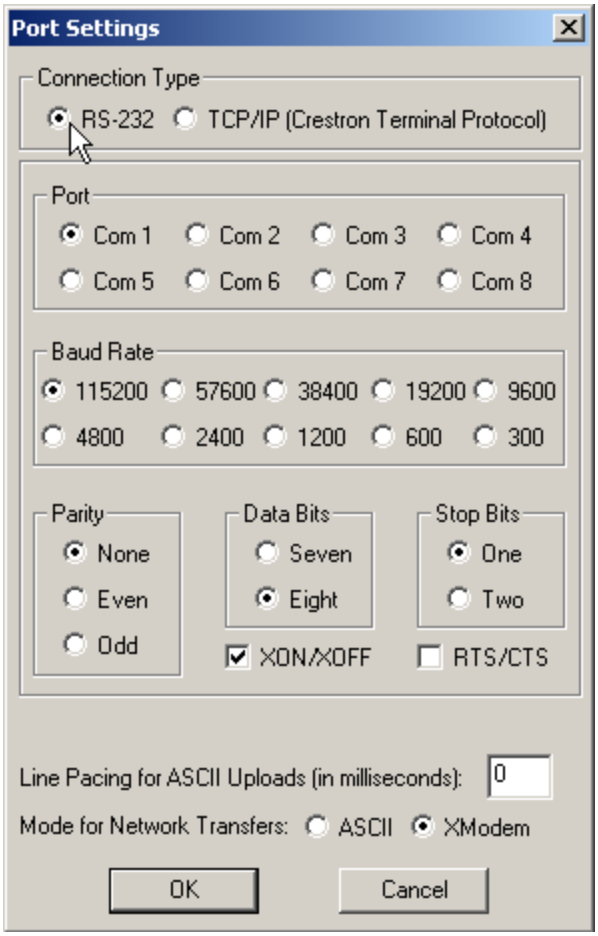
Load the Viewport program from the CD (provided by SVS) onto a PC. Connect the Crestron E-Server to the PC using the pin connections described above.

Open the Viewport program. Select **Setup, Communications Settings.**



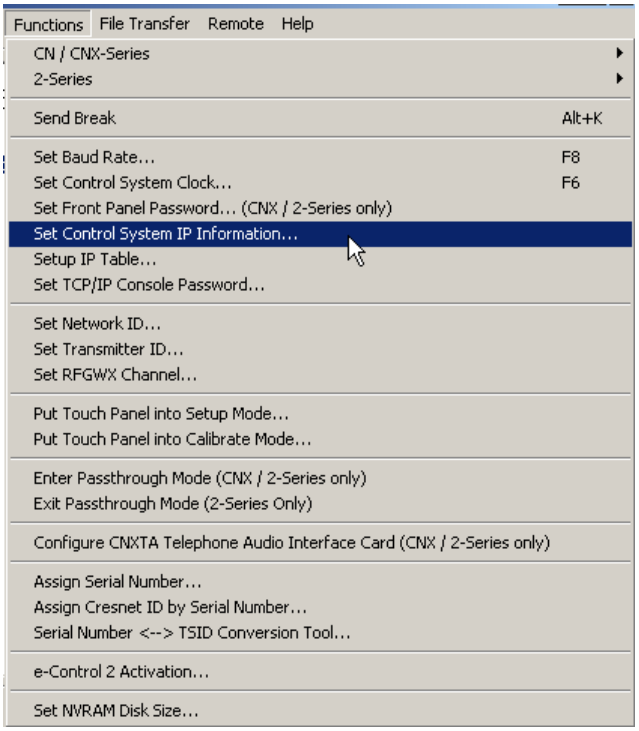
From the Communications Settings window (Port Settings), select;

- Connection Type- RS-232
- Port- Your Com port on the PC
- Baud Rate- 115200
- Parity- None
- Data Bits- 8
- Stop Bits- 1
- Place a check in the XON/XOFF box
- Line Pacing for ASCII Uploads- 0
- Mode for Network Transfers- XModem



Click **OK.** Press “enter” on the PC’s keyboard. You should see a prompt in the Viewport window; **QM-RMC>**

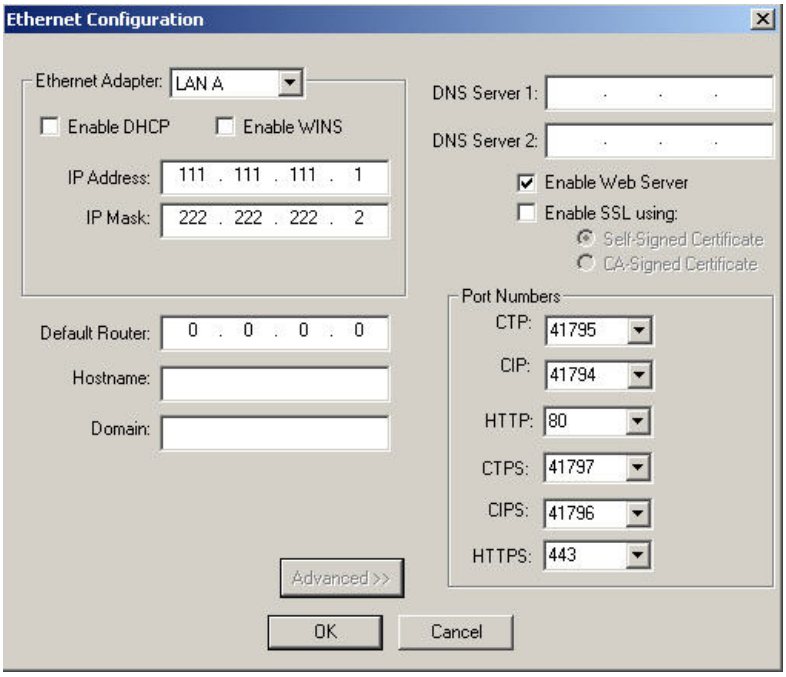
Select **Functions, Set Control System IP Information…**



From the Ethernet Configuration window, click on **Advanced** to display the full window, and then select **LAN A** and enter your IP information.

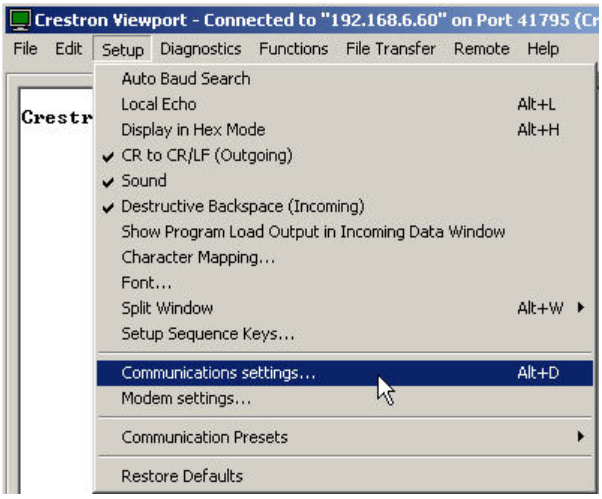
⚠ Warning:

DO Not change the port Numbers!



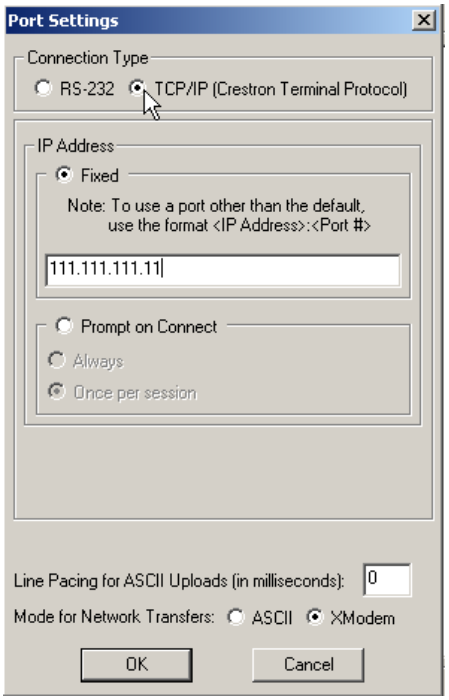
Click **OK.**

From the Viewport Screen select **Setup, Communications Settings.**



From the Communications Settings window (Port Settings), select;

TCP/IP (Transmission Control Protocol/Internet Protocol) Check **Fixed** and enter the IP address you used in the Ethernet Configuration screen.



Connect to a LAN cable.

Click **OK.** The E-Server should re-connect and give you a prompt. Once it connects, verify communication by pressing “Enter” on the keyboard. You should get a prompt.

The bottom of the Viewport screen should say;

Port Settings: Connected to “xxx.xxx.xxx.xxx (your IP address)” on Port 41795 (Crestron Terminal Protocol)

Disconnect the serial cable between the PC and the COM B of the E-Server.

Chapter

3

Operation

Introduction

You must have Sun Microsystems Java web start installed on your PC. This can be downloaded from http://java.com/en/index.jsp . This will enable your PC to correctly read the web pages stored in the E-Server.

Internet Explorer version 6 or later must be installed, available from: http://www.microsoft.com/windows/ie/downloads

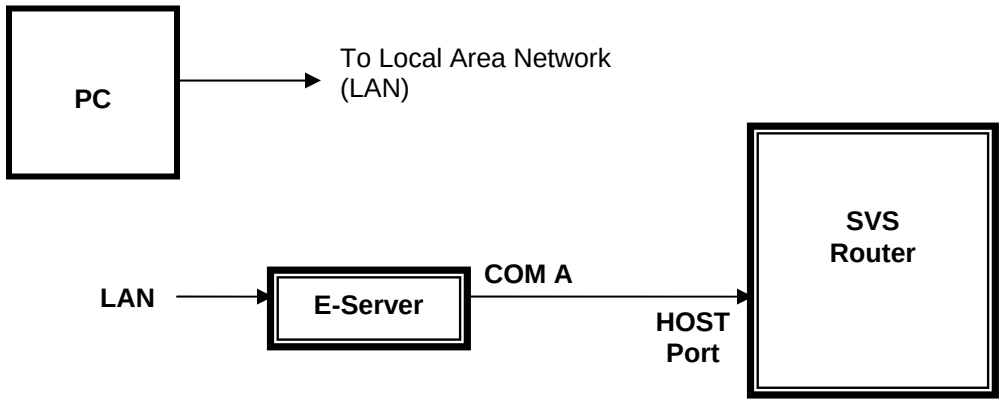
Connect a LAN cable to the E-Server and connect the COM A port to the router's HOST port. Verify serial port wiring in the router's manual.

⚠ **Warning:**

The router's HOST port MUST be set to 115200 baud.

Routers are typically shipped from the factory at 9600 baud unless specified at the time of order.

Refer to the router's manual for processor DIP switch settings and serial cable wiring..



Once all connections are in place, open your Browser and type in the IP address you entered in the E-Server setup in the address line.

The following screen should display:

sierravideosystems
Made in the United States of America
Sierra Video Systems
Browser-Based Router Control Panels
Using Crestron QM-RMC Gateway
Panel Choices:
Standard Control Panel: Provides easy-to-use alphanumeric entry for AFV routing.
Breakaway Control Panel: Same as above plus A/V breakaway and level-by-level router status view.
Programmable Control Panel: Same as above plus 8x8 programmable X-Y buttons for single-button takes.
See User's Manual for Installation and Help

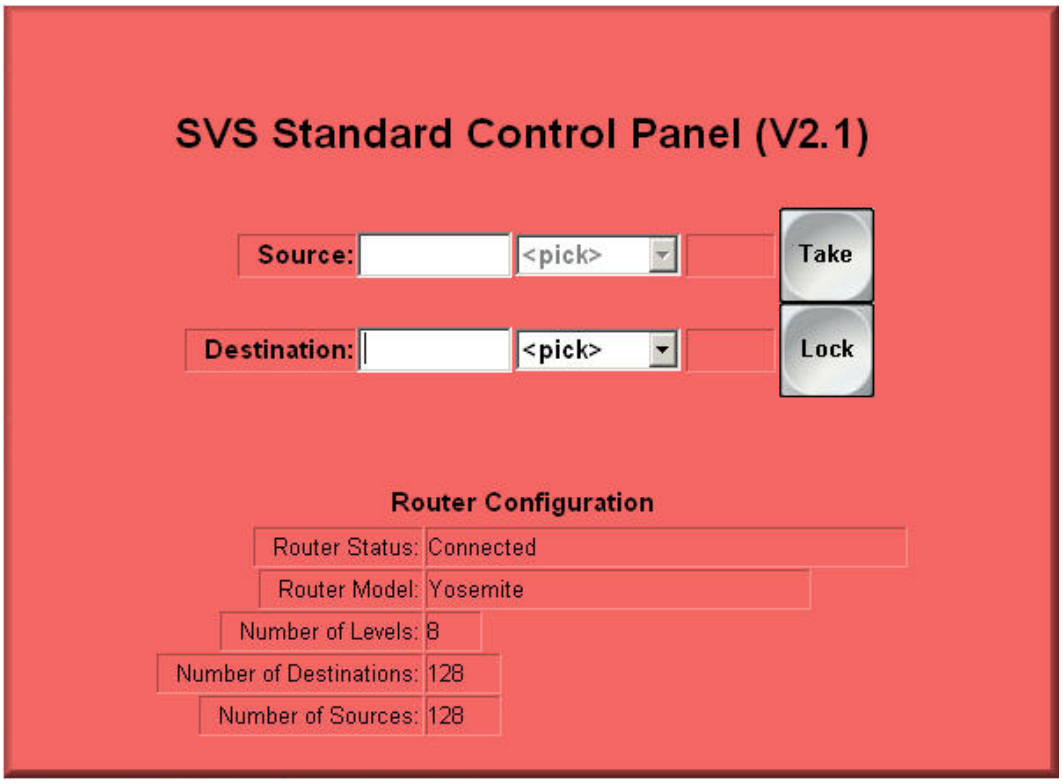
Panel Operation

There are three types of virtual control panels to choose from, depending on your view preferences. The following section describes each Control Panel type.

Standard Control Panel

Click on **Standard Control Panel**. The message “Getting Router Model” will display next to **Router Status**. This is an indication that the program is attempting to contact the router for information. This may take several minutes. If this message does not change, check the connection between the E-Server and the router. This applies to all panel types.

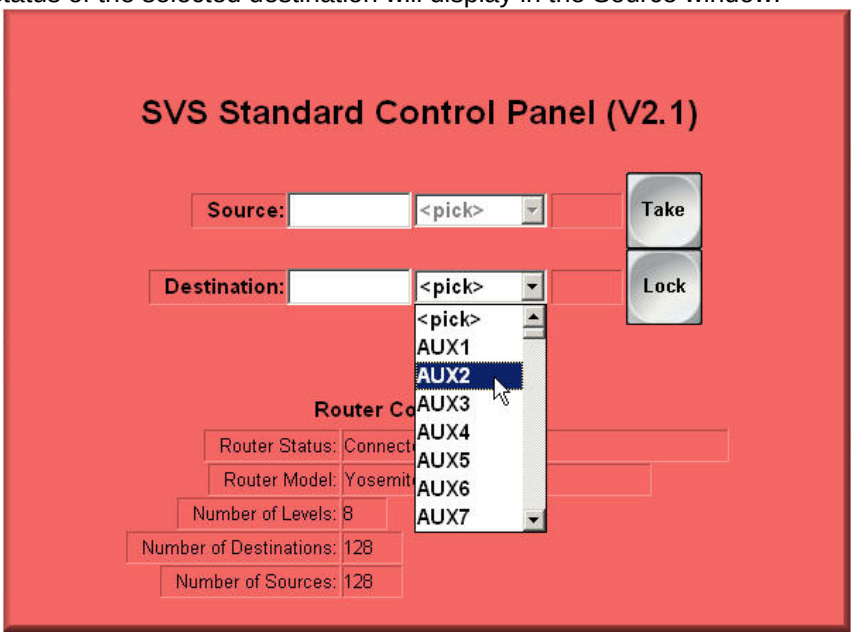
The Standard Control Panel is intended for switching “all levels” and is not capable of breaking levels (i.e. Video from Audio).



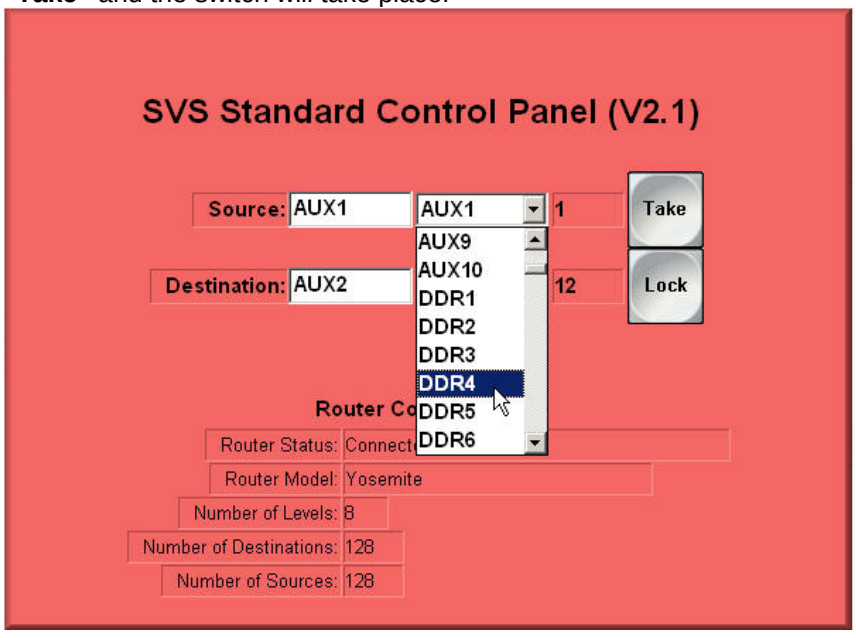
The **Router Configuration** section of the screen will display the router’s information.

Switching

To make a switch, first select a destination from the **Destination** drop down list. The current status of the selected destination will display in the Source window.



Select a new source from the **Source** drop down list and the **"Take"** button will light. Click on **"Take"** and the switch will take place.



You can also switch by entering the numeric value of the Input or Output.

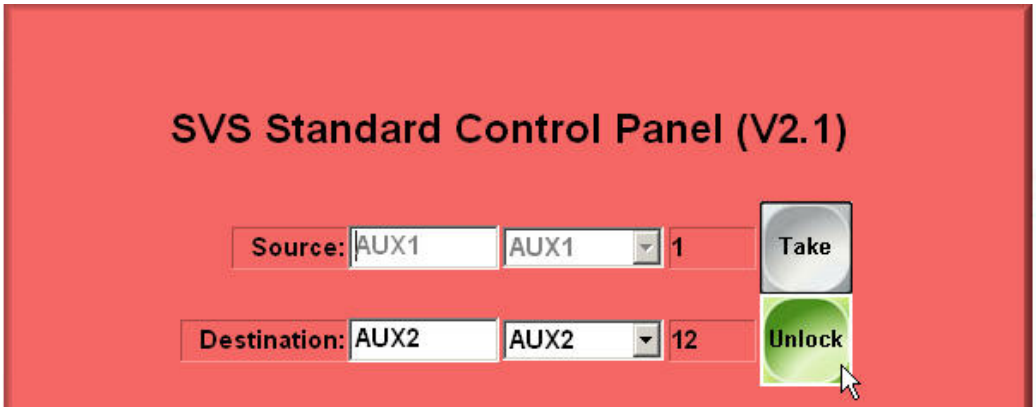
Status

When a destination is selected, the current status (source currently connected to that destination) is displayed in the source window.

Lock

You may want to “Lock” a destination to prevent someone on the system from changing the source of that destination.

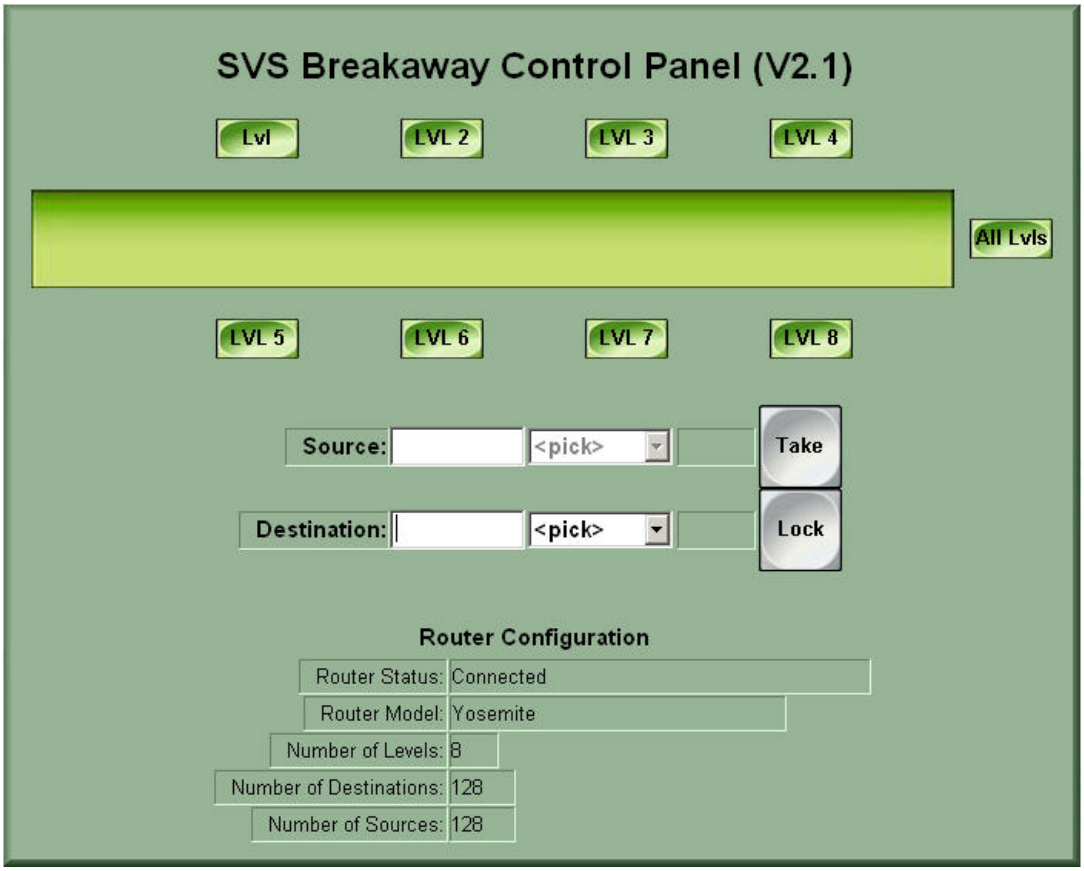
To “Lock” a destination, after switching, click on the **“Lock”** button. The “Lock” button will change color and the button label will display “Unlock” indicating that the next time the button is pressed the function will be to “Unlock” the destination. The selected destination will now be locked preventing source changes to be made to that destination.



To “Unlock” click on the **“Unlock”** button. The button will change color and the label will display “Lock”.

Breakaway Control Panel

The Breakaway Control Panel gives you the option of switching selected levels or all levels.



Switching

To make a switch, first select a destination from the **Destination** drop down list. Select the levels to be switched (lit level buttons indicate enabled), then select a source from the **Source** drop down list and the “Take” button will light.

Click **“Take”** and the switch will take place.

This panel can also numerically switch and lock destinations similar to the Standard Control Panel.

Lock

You may want to “Lock” a destination to prevent someone on the system from changing the source of that destination.

To “Lock” a destination, after switching, click on the **“Lock”** button. The “Lock” button will change color and the button label will display “Unlock” indicating that the next time the button is pressed the function will be to “Unlock” the destination. The selected destination will now be locked preventing source changes to be made to that destination.

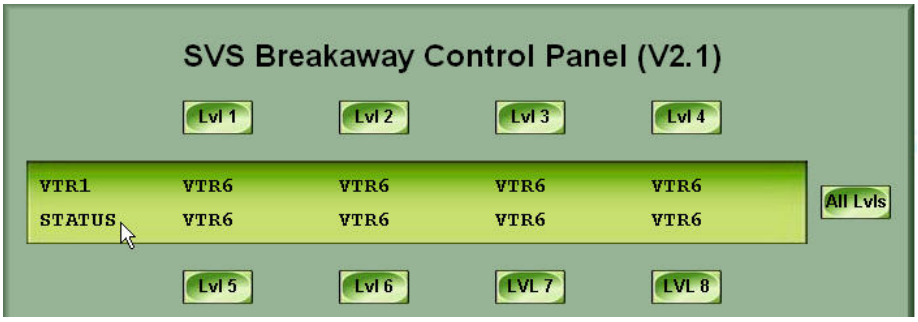
Breakaway Switching

The lit level buttons indicate the levels to be switched (preset).

To turn off a level(s) click on the level button and the button will dim. Click on “All Lvls” to restore to an “all level” preset.

Status

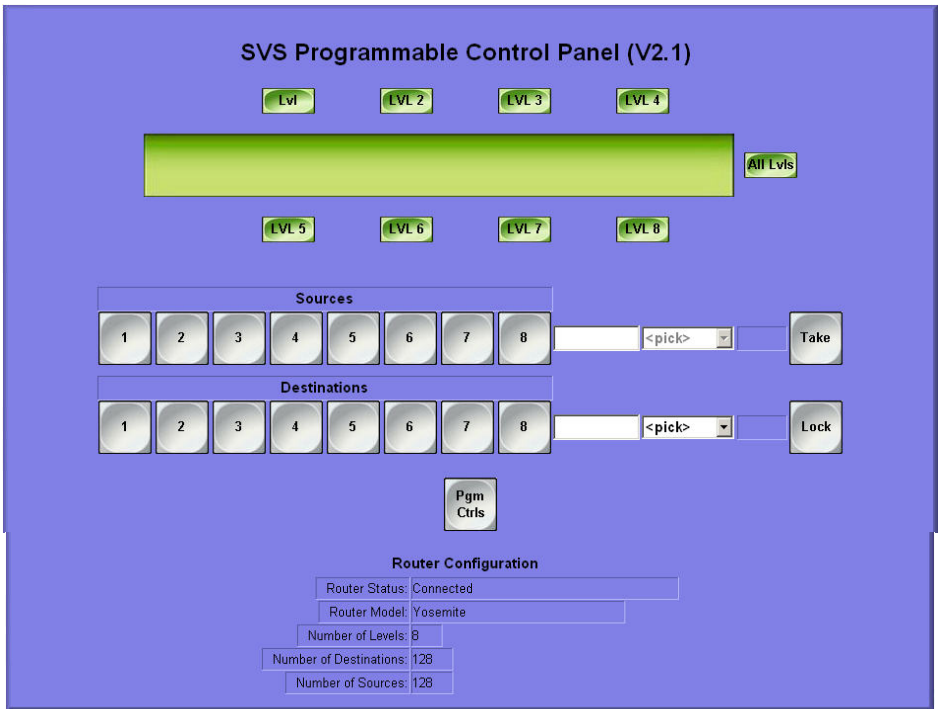
Individual Level status is indicated in the “Status” window at the top of the screen.



Programmable Control Panel

The Programmable Control Panel allows the user to program Source and Destination buttons to any source or destination desired.

The programming of this panel can be “Password Protected”.



Programming Allowable Inputs and Outputs

Buttons can be programmed to specific sources and destinations allowing access to most often used sources and destinations.

To program the panel’s defined inputs and outputs;

Click on **Pgm Btns**

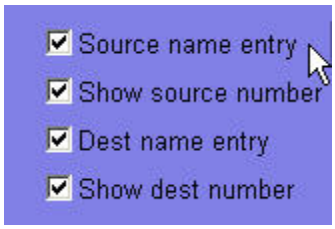
This screen will display;

Enter a Password, if desired.

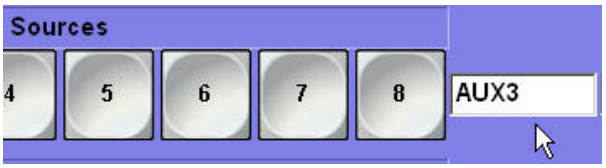
Select the destinations and sources you want the panel to display from the dropdown lists.

Panel options

Display and operational options can be selected by placing a check in the appropriate box.

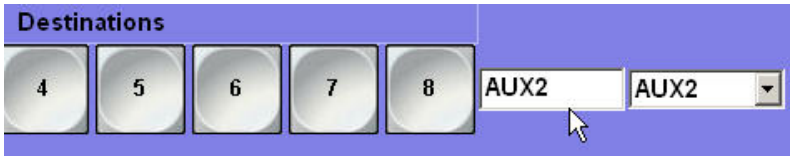


- Source name entry- Placing a check in this box allows the user to select a source by typing the name of the source in the window next to the source buttons. If this box is not checked the window will not be displayed.



- Show source number- Placing a check in this box displays the virtual source number in a screen next to the “Take” button.

- Destination name entry- Placing a check in this box allows the user to select a destination by typing the name of the destination in the window next to the destination buttons. If this box is not checked the window will not be displayed.

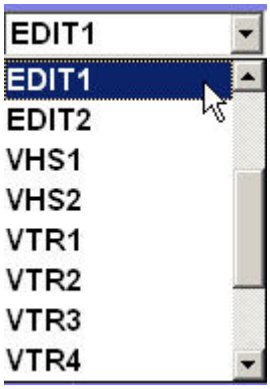


- Show destination number- Placing a check in this box displays the virtual destination number in a screen next to the “Lock” button.

Programming Buttons

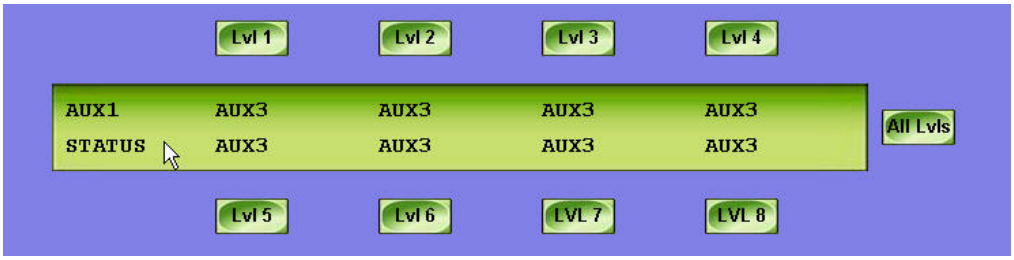
The panel's buttons may be programmed to provide "shortcuts" for the operator.

With the "Pgm Ctrls" screen open, select a source or destination from the dropdown list and click on the button to be programmed. The button will display the selection and will select the programmed I/O when pressed.



Status

Individual Level status is indicated in the "Status" window at the top of the screen.



⚠ Warning:

When switching using programmed buttons, the switch will occur as soon as a new source is selected (auto take).

Lock

You may want to “Lock” a destination to prevent someone on the system from changing the source of that destination.

To “Lock” a destination, after switching, click on the **“Lock”** button. The “Lock” button will change color and the button label will display “Unlock” indicating that the next time the button is pressed the function will be to “Unlock” the destination. The selected destination will now be locked preventing source changes to be made to that destination.

Chapter 4

Warranty

A. General

Buyer assumes all responsibility for ascertaining the suitability of Sierra Video (hereinafter "SVS") products for Buyer's intended use. No product sold by SVS is designed or manufactured for use in any manner or under any conditions other than those described in SVS's instruction manuals and other printed material for each particular product. If any product is used or applied in a manner or under conditions not specifically authorized by such written materials or if any product is used by unqualified or improperly trained personnel, Buyer agrees that SVS shall have no liability of any kind arising from such use, and Buyer agrees to indemnify and hold SVS harmless from any claims of third parties arising from such use, and Buyer shall provide SVS with counsel of SVS's choice to defend against such claims.

B. Limited Warranty

1. This limited warranty applies only to the original purchaser and is non-transferable. This limited warranty begins on the date of purchase and will be in effect for seven (7) years for new equipment and for three (3) years for "Factory Refurbished" equipment. Power Supplies and fans are warranted for three (3) years from the date of purchase for new equipment and two (2) years for “Factory Refurbished” units, from the date of purchase.
Buyer must obtain a Return Material Authorization ("RMA") number from SVS prior to returning a product for repair. If, in SVS' sole discretion, the product is found to be defective during the term of this warranty, SVS will at its option: (a) provide free replacement parts, and/or (b) repair the unit at an SVS facility. During the warranty period, SVS will make every reasonable effort to support critical emergencies by supplying no-cost loan equipment while the defective unit is being repaired. SVS will provide replacement parts and/or factory service at no charge. Buyer bears the cost of shipping products returned to SVS under this warranty. SVS will bear the cost of shipping repaired products or replacement parts to the Buyer.

This limited warranty shall not apply to any of SVS's goods which have been altered or which have been subjected to misuse, mishandling, improper storage or negligence. The aforementioned provisions do not extend the original warranty period of any goods which have been replaced by SVS. This limited warranty shall not apply to any goods not of SVS's manufacture, Buyer to be entitled only to the warranty set forth in the original manufacturer's limited warranty.

THIS LIMITED WARRANTY IS EXPRESSED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON SVS'S PART.

SVS neither assumes nor authorizes any other person to assume for SVS any other liabilities in connection with the sale of products of its own manufacture.

2. SVS's liability hereunder on any claim of any kind, except as set forth herein for any loss, injury to person or property or damage, shall in no case exceed the price allocable to the goods which give rise to such claim.

3. In no event shall SVS be liable for any damages or injuries to person or property if any goods do not meet the above limited warranty, including, without limitation, incidental expenses or consequential or special damages, except as set forth in such limited warranty. The foregoing states the exclusive remedy of Buyer and the exclusive liability of SVS for any breach of the foregoing limited warranty.

C. Cancellation

Except as provided in paragraph B immediately above, all sales are final, and Buyer may cancel this order or return products only upon written consent of SVS.

D. General

In the event of a breach of any of the terms hereof, the non-breaching party shall be entitled to recover all of its costs, fees, and expenses, including, without limitation, reasonable attorney's fees, from the breach party incurred as a result of such breach, regardless of whether or not a suit is actually filed to enforce the terms hereof.

The provision hereof shall be governed by the laws of the State of California (excluding its choice of law provisions).

The headings are for convenience only and do not limit or amplify the terms and provisions hereof.

In case any one or more of the provisions set forth herein shall be held to be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

No waiver, alteration, or modification of any of the provisions hereof shall be binding unless in writing and signed by an authorized Officer of SVS.

NOTE:

All products returned to SVS for service must have prior approval. Return authorization requests may be obtained from your SVS dealer.